

Boian S Alexandrov

List of Publications by Year in descending order

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Version: 2024-02-01

63
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1,467
citations

361413

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68
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docs citations

68
times ranked

1629
citing authors

#	ARTICLE	IF	CITATIONS
1	General-purpose Unsupervised Cyber Anomaly Detection via Non-negative Tensor Factorization. Digital Threats Research and Practice, 2023, 4, 1-28.	2.4	3
2	Nonnegative canonical tensor decomposition with linear constraints: nnCANDELINC. Numerical Linear Algebra With Applications, 2022, 29, .	1.6	1
3	Finding the Number of Latent Topics With Semantic Non-Negative Matrix Factorization. IEEE Access, 2021, 9, 117217-117231.	4.2	15
4	Improved Protein Decoy Selection via Non-Negative Matrix Factorization. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2021, PP, 1-1.	3.0	1
5	Boolean Matrix Factorization via Nonnegative Auxiliary Optimization. IEEE Access, 2021, 9, 117169-117177.	4.2	3
6	Automatic Model Determination for Quaternion NMF. IEEE Access, 2021, 9, 152243-152249.	4.2	1
7	The cardiac molecular setting of metabolic syndrome in pigs reveals disease susceptibility and suggests mechanisms that exacerbate COVID-19 outcomes in patients. Scientific Reports, 2021, 11, 19752.	3.3	1
8	An Out of Memory tSVD for Big-Data Factorization. IEEE Access, 2020, 8, 107749-107759.	4.2	2
9	The genomic and epigenomic evolutionary history of papillary renal cell carcinomas. Nature Communications, 2020, 11, 3096.	12.8	19
10	Increased irrigation water salinity enhances nitrate transport to deep unsaturated soil. Vadose Zone Journal, 2020, 19, e20041.	2.2	7
11	Distributed non-negative matrix factorization with determination of the number of latent features. Journal of Supercomputing, 2020, 76, 7458-7488.	3.6	17
12	Metabolomics and the pig model reveal aberrant cardiac energy metabolism in metabolic syndrome. Scientific Reports, 2020, 10, 3483.	3.3	8
13	Identification of anomalous diffusion sources by unsupervised learning. Physical Review Research, 2020, 2, .	3.6	5
14	Distributed Non-Negative Tensor Train Decomposition. , 2020, , .		5
15	Semantic Nonnegative Matrix Factorization with Automatic Model Determination for Topic Modeling. , 2020, , .		7
16	Decoy Selection in Protein Structure Determination via Symmetric Non-negative Matrix Factorization. , 2020, , .		2
17	Determination of latent dimensionality in international trade flow. Machine Learning: Science and Technology, 2020, 1, 045017.	5.0	3
18	Coarse-grain cluster analysis of tensors with application to climate biome identification. Machine Learning: Science and Technology, 2020, 1, 045020.	5.0	0

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19	Unsupervised Machine Learning for Analysis of Phase Separation in Ternary Lipid Mixture. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 6343-6357.	5.3	18
20	Nonnegative tensor decomposition with custom clustering for microphase separation of block copolymers. <i>Statistical Analysis and Data Mining</i> , 2019, 12, 302-310.	2.8	8
21	Non-Negative Matrix Factorization for Selection of Near-Native Protein Tertiary Structures. , 2019, , .		6
22	Robust effect of metabolic syndrome on major metabolic pathways in the myocardium. <i>PLoS ONE</i> , 2019, 14, e0225857.	2.5	9
23	Nonnegative tensor factorization for contaminant source identification. <i>Journal of Contaminant Hydrology</i> , 2019, 220, 66-97.	3.3	15
24	Identification of release sources in advection–diffusion system by machine learning combined with Green’s function inverse method. <i>Applied Mathematical Modelling</i> , 2018, 60, 64-76.	4.2	20
25	Contaminant source identification using semi-supervised machine learning. <i>Journal of Contaminant Hydrology</i> , 2018, 212, 134-142.	3.3	46
26	Nonnegative/Binary matrix factorization with a D-Wave quantum annealer. <i>PLoS ONE</i> , 2018, 13, e0206653.	2.5	68
27	Unsupervised phase mapping of X-ray diffraction data by nonnegative matrix factorization integrated with custom clustering. <i>Npj Computational Materials</i> , 2018, 4, .	8.7	70
28	Nonnegative Matrix Factorization for identification of unknown number of sources emitting delayed signals. <i>PLoS ONE</i> , 2018, 13, e0193974.	2.5	10
29	Evaluating the role of coherent delocalized phonon-like modes in DNA cyclization. <i>Scientific Reports</i> , 2017, 7, 9731.	3.3	13
30	Dynamical Model of Drug Accumulation in Bacteria: Sensitivity Analysis and Experimentally Testable Predictions. <i>PLoS ONE</i> , 2016, 11, e0165899.	2.5	8
31	The role of structural parameters in DNA cyclization. <i>BMC Bioinformatics</i> , 2016, 17, 68.	2.6	7
32	Blind source separation for groundwater pressure analysis based on nonnegative matrix factorization. <i>Water Resources Research</i> , 2014, 50, 7332-7347.	4.2	43
33	A Rare Functional Noncoding Variant at the GWAS-Implicated MIR137/MIR2682 Locus Might Confer Risk to Schizophrenia and Bipolar Disorder. <i>American Journal of Human Genetics</i> , 2014, 95, 744-753.	6.2	91
34	Specificity and Heterogeneity of Terahertz Radiation Effect on Gene Expression in Mouse Mesenchymal Stem Cells. <i>Scientific Reports</i> , 2013, 3, 1184.	3.3	78
35	Binding of Nucleoid-Associated Protein Fis to DNA Is Regulated by DNA Breathing Dynamics. <i>PLoS Computational Biology</i> , 2013, 9, e1002881.	3.2	23
36	DNA breathing dynamics distinguish binding from nonbinding consensus sites for transcription factor YY1 in cells. <i>Nucleic Acids Research</i> , 2012, 40, 10116-10123.	14.5	39

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37	Anharmonic dynamics of intramolecular hydrogen bonds driven by DNA breathing. <i>Physical Review E</i> , 2012, 86, 061913.	2.1	2
38	Promoter polymorphisms in two overlapping 6p25 genes implicate mitochondrial proteins in cognitive deficit in schizophrenia. <i>Molecular Psychiatry</i> , 2012, 17, 1328-1339.	7.9	19
39	Entropy-Driven Conformations Controlling DNA Functions. <i>Springer Series in Materials Science</i> , 2012, , 273-292.	0.6	4
40	Non-thermal effects of terahertz radiation on gene expression in mouse stem cells. <i>Biomedical Optics Express</i> , 2011, 2, 2679.	2.9	73
41	Feigenbaum cascade of discrete breathers in a model of DNA. <i>Physical Review E</i> , 2011, 83, 011904.	2.1	29
42	Robust accidental nodes and zeros and critical quasiparticle scaling in iron-based multiband superconductors. <i>Physical Review B</i> , 2011, 84, .	3.2	13
43	DNA Dynamics Is Likely to Be a Factor in the Genomic Nucleotide Repeats Expansions Related to Diseases. <i>PLoS ONE</i> , 2011, 6, e19800.	2.5	8
44	DNA breathing dynamics in the presence of a terahertz field. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 1214-1217.	2.1	143
45	Mammalian Stem Cells Reprogramming in Response to Terahertz Radiation. <i>PLoS ONE</i> , 2010, 5, e15806.	2.5	109
46	DNA dynamics play a role as a basal transcription factor in the positioning and regulation of gene transcription initiation. <i>Nucleic Acids Research</i> , 2010, 38, 1790-1795.	14.5	59
47	A nonlinear dynamic model of DNA with a sequence-dependent stacking term. <i>Nucleic Acids Research</i> , 2009, 37, 2405-2410.	14.5	61
48	Pre-melting dynamics of DNA and its relation to specific functions. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 034107.	1.8	25
49	Toward a Detailed Description of the Thermally Induced Dynamics of the Core Promoter. <i>PLoS Computational Biology</i> , 2009, 5, e1000313.	3.2	35
50	Nonlinearity in DNA and its Relation to Specific Functions. <i>Journal of Biological Physics</i> , 2009, 35, 31-41.	1.5	6
51	Temperature behavior of NaI(Tl) scintillation detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009, 607, 432-438.	1.6	59
52	Branching transport model of NaI(Tl) alkali-halide scintillator. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008, 586, 432-438.	1.6	12
53	Profiling the Thermodynamic Softness of Adenoviral Promoters. <i>Biophysical Journal</i> , 2008, 95, 597-608.	0.5	25
54	New generation enrichment monitoring technology for gas centrifuge enrichment plants. , 2008, , .		4

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55	Neutron and gamma discrimination by compensation of long components in liquid scintillators. , 2007, , .		3
56	Electronics and signal processing for prompt radiation. , 2007, , .		1
57	Temperature dependence of nonlinearity and pulse shape in a doped NaI(Tl) scintillator. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 34-37.	1.6	10
58	Ultra-violet light induced changes in DNA dynamics may enhance TT-dimer recognition. DNA Repair, 2006, 5, 863-867.	2.8	31
59	Effect of Temperature on Counting Measurements in a Uranium Enrichment Monitor Based on a NaI(Tl) Spectrometer and Transmission Source. , 2006, , .		3
60	Bubble statistics and dynamics in double-stranded DNA. Physical Review E, 2006, 74, 050901.	2.1	45
61	Lifshitz correlation in the hopping conductivity of high-temperature superconductors in the localized state. Physica C: Superconductivity and Its Applications, 1992, 201, 126-130.	1.2	3
62	A neural network for determination of latent dimensionality in Nonnegative Matrix Factorization. Machine Learning: Science and Technology, 0, , .	5.0	7
63	Factorization of Binary Matrices: Rank Relations, Uniqueness and Model Selection of Boolean Decomposition. ACM Transactions on Knowledge Discovery From Data, 0, , .	3.5	2